

WASHINGTON UTILITIES COORDINATING COUNCIL

RECOMMENDED DIGGING GUIDELINES

COMMUNICATE • COOPERATE • COORDINATE



Know what's below.
Call before you dig.



Call 811
1.800.424.5555
callbeforeyoudig.org

Preface

The guidelines set forth in this booklet were developed and collected by the Washington Utilities Coordinating Council (WUCC), established in 1972.

The purpose of this statewide organization of utilities, government agencies, contractors, excavators, and other interested organizations and individuals is to cooperate to reduce damages to utility facilities for the safety of people and property.

With increased numbers of utilities installed underground, the WUCC works to achieve the orderly planning and installation of buried facilities.

These guidelines and suggested standards follow state and national standards or laws.

This booklet is available to all in the State of Washington as a means to help reduce damage to utilities, avoid interruption of service, and to protect the worker and the general public.

Every effort has been made to assure the accuracy of the information.

Go to: WWW.WUCC.ORG
To Find Your Local Utility Coordinating Council, and learn more about the Washington Utilities Coordinating Council.

Acknowledgments: Alderwood Water and Wastewater, Comcast Cable, & UULC



PUGET SOUND ENERGY
The Energy To Do Great Things

Printing sponsored by: Puget Sound Energy, Snohomish County Utilities Coordinating Council

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Important Numbers

Before You Dig:
CALL 811 (a.k.a) **1.800.424.5555**
Itic lets you enter your locate requests online: visit **www.callbeforeyoudig.org**, “CLICK Itic” and sign up.

Life or Death Emergency **911**

Labor & Industries: Link to the L&I construction safety rules:
www.lni.wa.gov/wisha/rules/construction/default.htm

Washington Utilities and Transportation Commission Pipeline Safety Program **1.800.664.1118**

Others:

Avista Utilities	1.800.227.9187
Cascade Natural Gas	1.866.412.8829
Olympic Pipeline	1.888.271.8880
Puget Sound Energy	1.888.225.5773
NW Natural	1.800.422.4012
Williams Pipeline	1.800.972.7733

Basic Terms

Call or Click* Before You Dig = CBYD

“Notice”: *Two business days before commencing any excavation*, excluding agriculture tilling less than twelve inches in depth, **the excavator shall call 811 or 1.800.424.5555** to provide notice of their scheduled start of excavation. * On busy days (M-W) hold time while waiting on the phone can be very lengthy. ***Entering your locate request via Itic eliminates holding. To learn more about Itic visit www.callbeforeyoudig.org**

“Excavation” means any operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means (RCW 19.122.020)

Emergency Excavation is Not Exempt from CBYD.

“Emergency” means any condition constituting a clear and present danger to life or property, or a customer service outage (RCW 19.122.020)

Emergency excavations are exempt from the time* requirements for notification. *Note: This applies to excavators as well as owner/operators of buried utilities.

Dangerous situations require immediate attention, but professional work methods must still be utilized by all parties. Play it safe: Avoid calling in dig jobs as emergency work if it does not meet the legal definition.

Report your emergency excavation to the CBYD center, then wait for the locators for as long as you can.

All parties should strive to maintain a list of cell, home, and after hours numbers. This process is facilitated by active participation in your local Utility Coordinating Council.

Keep in mind that utilities damaged during any excavation are subject to the claims process by the owner. Keep good notes, photos, and other records; if damage is through no fault of your own, you will need proof.

Limits Of Locating & Marking

Private Property

The utilities will only mark the lines to their own meters. Underground lines beyond the meter or service entrance belong to the property owner, and are that person's responsibility (e.g., apartment houses, mobile home parks, memorial parks, schools, etc.) Private locators are available to provide this service for a fee.

Sewer and Water Laterals

Some owners of mains locate and mark laterals in their right-of-way, and others do not; some mark one and not the other. Check with city or county right-of-way personnel.

Cost

The law states that the owner of the underground facility shall have the right to receive compensation for costs incurred in responding to excavation notices given with less than two business days notice.

Guidelines For Safe Excavation

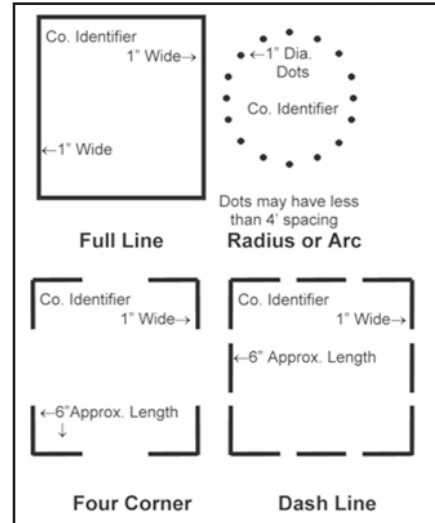
1. Identify your proposed dig site on a map; taking note of city, county, & obvious landmarks. Determine distance and direction from nearest cross street, proximity of planned work to overhead electric lines, location of right-of-ways, and if no specific street or address is applicable, the township, range, section, and quarter-section of the work site.
2. Accurate & timely locates are crucial for a successful dig. All owner/operators of buried facilities should endeavor to provide current as-built plans to their locators. Markings should follow industry recommendations (see Single Point Excavation Markings illustration below)

WE STRONGLY recommend that excavators outline the dig area with white paint:

The use of white marking products (e.g. paint, flags, stakes, whiskers or a combination of these) may be used to identify the excavation site. Review all the American Public Works Association (APWA) marking recommendations at

National Utility Locating Contractors Association web site: <http://www.nulca.affiniscap.com/> (click NULCA Guides, then Standards button).

Single Point Excavation Markings



3. At least two-business days in advance, but no sooner than ten-business days, provide notice of scheduled excavation to owner/operators of buried utilities by **CALLING* 811 (a.k.a. 1.800.424.5555) or "CLICKING Itic."** * On busy days (M-W) hold time at 811 can be very lengthy. Entering your locate request via Itic eliminates ALL waiting. Get Itic info at www.callbeforeyoudig.org. Be prepared to provide details you researched in Guidelines step 1, as well as the nature of the work, the date and time you plan to begin digging, the name of your customer, and a number where you can be reached. When finished, you will be given an excavation confirmation number, or ticket number. The ticket number is proof that you called. If you need to call back for any reason, you will be asked for the tickets number-please keep it handy. Utility companies might require your ticket number if you contact them about your locate request or excavation plans, you might also be required to provide your ticket number to inspectors, or law enforcement personnel.

4. Washington law requires that all owners of underground facilities be members of the **CBYD** system; most have joined, but there are still some holdouts. Therefore you must make separate calls to the owners of underground facilities that are not **CBYD** members. When you call **811** or **1.800.424.5555** the **CBYD** personnel will give you a list of all members who will be notified. Those members have two business days to locate and mark their locatable buried facilities; if lines are un-locatable, they must provide best available information as to their location.

5. Wait two business days after the day you give notice before beginning your excavation. **NOTE: The day of your call doesn't count.**

6. NO digging is to take place until ALL known utilities are marked.

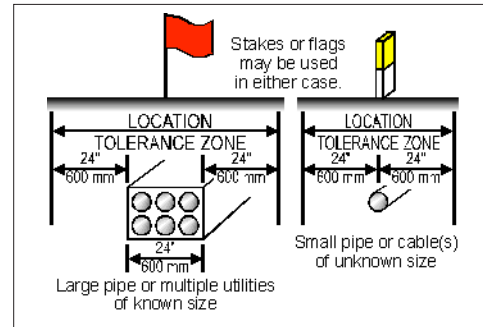
7. Any excavator that violates these rules, and damages buried lines, will be liable for certain fines and penalties and be held responsible by the owner to pay up to three times the cost to restore the broken facility.

Some violations carry criminal charges. **Note RCW 19.122.090: "Any excavator who excavates, without a valid excavation confirmation code when required under this chapter, within thirty-five feet of a transmission pipeline is guilty of a misdemeanor."**

8. Excavators shall have the right to receive compensation from the owner of the underground facility for costs incurred if the owner of the underground facility does not locate/mark its facilities in accordance with Washington law. **Note RCW 19.122.020 "Marking means the use of stakes, paint, or other clearly identifiable materials to show the field location of underground facilities, in accordance with the current color (see back cover) code standard of the American Public Works Association. Markings shall include identification letters indicating the specific type of the underground facility."**

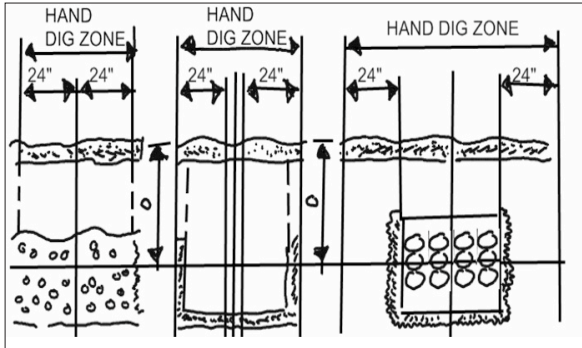
9. Respect the marks which identify the location of the buried facilities. Once the owner/operator of the buried utility marks their buried lines, it is the responsibility of the excavator to **MAINTAIN** the marks. Compliance with this section of law may be attained by following the recommended guideline on page 39.
10. Owner/operators of buried utilities are required to mark their locatable buried lines with reasonable accuracy. RCW 19.122.020 states "Reasonable accuracy means location within twenty-four inches of the outside dimensions of both sides of an underground facility." This area is called the "Tolerance Zone". (See Tolerance Zone illustration below.)

Tolerance Zone



11. To avoid damaging underground facilities an excavator shall determine the precise location of underground facilities which have been marked; accepted industry opinion is that precise determination can only be made by exposing the buried utility. Depending on site conditions, we recommend one or a combination of the following options: careful hand digging (See Hand Dig illustration on the following page.), pot-holing and vacuum excavation, hand tools that use air or water under pressure, or other non-invasive methods*. Exposing buried utilities via any mechanized method (e.g., backhoe, grader, jack hammer, etc.) is not acceptable. For large projects, sub surface engineering may be the least expensive means of determining the precise location of buried facilities. *Although considered non-invasive by many, care should be taken when using these methods near pipe coating; they have been known to cause damage to the wrapping.

Hand Dig



12. Get the big picture. Owner/operators of buried utilities do not have to mark lines if their presence can be determined by other visible facilities, such as buildings, manholes, catch basins or meter and junction boxes on or adjacent to the construction site.

Pipeline Safety

The Washington Utilities and Transportation Commission has authority, granted by the federal Office of Pipeline Safety, to enforce compliance with safe operations and work methods around interstate pipeline facilities. They have similar authority over intrastate natural gas providers. State agencies, citizen committees, other organizations devoted to pipeline safety and the citizens of Washington take special notice of issues relating to damage prevention to pipelines; including excavation on or near buried natural gas, or petroleum facilities.

Information about specific petroleum pipeline companies is available by calling them directly see contact info at front of book.

The following info provided by Puget Sound Energy has been prepared to help you understand the potential hazards involved when working near energized overhead or underground power lines as well as natural gas pipelines.

Natural Gas Demands Respect:

A leading cause of natural gas pipeline incidents is third party damage. As with buried electric cable, excavators must take particular care when working and digging near natural gas pipelines.

Natural gas is safe, reliable and predictable when properly contained and used. While it is combustible, it will ignite only when in the range of 4% to 14% gas in air mixture. A distinctive odorant is added to aid in leak detection. If a pipeline rupture or leak occurs, natural gas can migrate under paved or hard surfaces into buildings and surrounding areas. Since it is lighter than air, natural gas will rise to the ceiling inside a structure where it can create a potential for explosion. Outside it will rise and dissipate safely into the air. **NOTE: In case of an emergency call 911.**

Natural gas is distributed in a variety of pressures and types of pipe. Steel pipelines, generally covered in a yellow plastic or black tar wrap ranging in size from ½ inch to 20 inches in diameter, are used when operating pressures are between 60 to 550 pounds per square inch (psig). These are considered **high pressure (HP)** mains and any excavation occurring in the area must be monitored continuously by utility personnel. Distribution pipelines serving homes and businesses are generally at a reduced or **intermediate pressure (IP)**, typically 35 - 60 psig. Bare or coated steel, wrought iron (2-6 inches) and **plastic polyethylene (PE)** pipe (5/8 to 8 inches) can be found. In some older urban areas, gas is delivered at **low pressures (LP)** of approximately 1/4 psig.

Work Practices

Directional boring

Gas lines must be pot-holed and identified prior to boring operations. Contact utility to verify pot-holed facilities prior to the bore operation. Leave pot-holes open and periodically inspect the facilities during the bore operation. Notify utility immediately of any concerns.

Open trenches

Once exposed, all natural gas facilities must be properly supported and protected from damage. If excavating parallel to a gas pipeline, call your local natural gas company for help with determining adequate support, protection and separation of the pipeline. Failure to properly support pipelines could result in a break or rupture. Use acceptable back-fill material, with no sharp rocks, gravel or slurry which can damage the coating on steel pipelines and cause failure of plastic pipelines over time. Always use sand or rock free dirt and back-fill six inches above and below natural gas pipelines, and avoid compacting directly over the pipeline.

Don't build any structures such as sheds, decks, etc. over any pipelines or other facilities. Aside from being a serious safety issue, natural gas utilities must have access to their buried gas lines at all times. For this reason, a minimum of 12 inches of separation should be maintained when crossing or running parallel to distribution lines. High-pressure supply lines require 36 inches of separation unless special permission is granted by the utility.

Other times to call utility:

Anytime pipe is dented, or the wrap is scraped it will need to be inspected before it is buried or covered with fill. Even if the pipe is just nicked or bent, leave it exposed so it can be inspected and any necessary repairs made. Care should be taken to avoid breaking the small wires located on or near natural gas pipelines. These are used for system protection or locating. If the wire is broken, notify the utility and they will make the repair.

The Following Material Is Included To Help Excavators Avoid Problems When Digging Around Or Near Natural Gas Pipe.

Backfilling Natural Gas Pipelines and Hazardous Liquid Pipelines

When a trench is backfilled, it must be backfilled in a manner that: Provides firm support under the pipe, and prevents damage to the pipe and pipe coating from equipment or from the backfill material.

Backfill material shall not contain: Garbage, cans, glass, recycled glass products, decomposable organic material, or construction debris, washed gravels, including pea gravel, material that will not compact, sharp objects, frozen clods, large rocks and stones, pieces of pavement, construction debris, wood skids or wedges, timbers, hay bales, boulders, or other material that may cause damage to the pipe, pipe coating, or casing/conduit.

NOTE: Do not unload backfill or pile it directly on top of PE pipe until proper support is provided for the pipe.

Backfill For General Construction

Initial backfill shall be sand, essentially rock free native soil, or soil-based select material that does not contain any rocks. If the native soil contains rocks, then a total of 12 inches of initial backfill shall be placed over the gas pipeline and across the full width of the trench.

Final backfill may be soil-based select material or native soil, but shall not contain rocks larger than 10 inches diameter to prevent impedance of gas system maintenance.

Final backfill shall be sufficient to withstand normal wear and tear from foot traffic, weather, and other activities that may cause erosion.

Compaction

All backfill shall be consolidated according to the terms of applicable permits and right-of-way agreements. In unimproved areas, the backfill shall be consolidated to match the original soil structure.

Care shall be taken to prevent damage to the buried gas facilities and other underground lines when compacting backfill.

Care shall be taken when compacting around service and branch connections and points of transition between PE and steel to insure well-compacted support and to protect the pipe and fittings from excessive external loads.

Backfill material shall be compacted in lifts thick enough to prevent damage to the pipe. If the trench is wide enough, the spaces to the sides of the pipe shall be compacted first. If compaction is done by:

Powered hand-operated equipment (such as Bigfoot or Jumping Jack), then the initial backfill lift over the pipe shall be 12 inches minimum.

Machine-operated equipment (such as Hoe-Pack or Hydro-Hammer), then the initial backfill lift over the pipe shall be 24 inches minimum.

Supporting Exposed Gas Pipeline

Contractors are required to provide such support for underground facilities in and near the construction area, including during backfill operations, as may be reasonably necessary for the protection of such facilities. Each support used for an exposed pipeline must be made of a durable, noncombustible material, and must be designed and installed such that:

Free expansion and contraction of the pipeline between supports, or anchors is not restricted. Movement of the pipeline does not cause disengagement of the support equipment. Damage to the pipe and its coating is prevented where the pipe contacts the support or anchor. When steel piping is supported or anchored, the pipe shall be insulated from the support or anchor. The temporary support or anchor shall be removed in its entirety without damage to the pipe and its coating. Steel cables, steel chain, or any sharp object shall not be used to support gas piping.

Natural Gas Incidents

- **Always call the local utility immediately** to report any damage, leaks or any other natural gas incident. If gas is leaking, evacuate immediate areas where gas is present. Keep people and traffic a safe distance and remove any sources of ignition (open flames, turn off engines / equipment, radios, etc.) around the area of the damaged line until utility arrives. If concerned with public safety always call 911 first.
- **Don't try to repair a damaged or broken natural gas line by covering, crimping, bending, or otherwise restricting the flow.** Don't touch a plastic pipe that is leaking. A spark from static electricity on plastic pipe could become an ignition source.
- **Don't try to extinguish a gas flame or fire.** If the natural gas is burning let it burn! If there is a threat to life or property call 911.

Responding To Natural Gas Incidents

If there is a concern with public safety always call 911 first. To report any damage, leaks, or other natural gas incident call local pipeline company (key numbers listed at front of book). If gas is leaking, evacuate immediate areas where gas is present. Keep people and traffic a safe distance and remove any sources of ignition (open flames, turn off engines, equipment, radios, etc) around the area of the damaged line until help arrives. Do not try to repair a damaged or broken natural gas line by covering, crimping, bending, or otherwise restricting the flow. All repairs must be made by the local natural gas provider

Any time pipe is dented, or the wrap is scraped the local natural gas provider will need to inspect it before it is buried or covered with fill. Even if the pipe is just nicked or bent, leave it exposed so the local natural gas provider can inspect it and make any necessary repairs. Care should be taken to avoid breaking the small wires located on or near natural gas pipelines. Companies with buried pipelines uses different types of wires, some are for locating plastic pipelines and others are necessary to monitor steel pipelines for proper protection from corrosion. If the wire is broken, call the local companies so repairs can be made to damage facilities.

Do not touch a plastic pipe that is leaking. A spark from static electricity on plastic pipe could become an ignition source. If natural gas is burning let it burn! Call 911, and then call the local natural gas provider.

Electricity Demands Respect

Electricity can shock, burn, or kill workers if it is not handled properly on the job site. Since it is always seeking the easiest path to ground, you or any other type of conductor (metal, wet wood, trees, machinery/equipment, tools, etc.) touching a power line could provide an immediate path to ground. The result can be severe injury or death.

Before Starting To Work Think Safety!

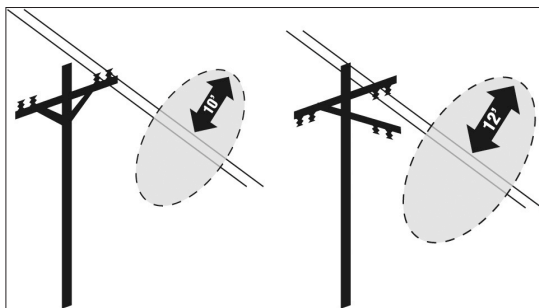
Be observant. If you have work to do near power lines or power facilities always consider them to be energized or hot.

Call the local utility for more information or to make arrangements that will help guarantee working conditions are safe. For your safety, the utility may turn off electricity, place barriers on lines, or as a last resort, relocate them. Because it takes time to do this work, plan your job ahead and let the utility know. For example, if it is feasible to take lines out of service, advance notice is required. There may be a charge for work performed by the utility.

Basic Rules For Electrical Safety

- **Ten feet is considered a minimum safe and legal clearance for equipment**, tools and people when working near overhead power lines and facilities. Never assume that power installations are insulated. State regulations require that a minimum of ten feet be maintained from energized overhead high voltage electrical conductors (up to 50,000 volts) with additional distance required for higher voltages (for example 12 feet 2 inches is required for 115,000 volts). (See Legal Clearance illustration below.) For exact distances and other requirements of the law when working near power lines, refer to the appropriate section in Washington Administrative Code (WAC 296-155-428).

Legal Clearance



- **Equipment near lines can contact the line accidentally** and injure the worker using the equipment. Hand-carried tools or materials are a common cause of accidents. Use extreme caution when carrying ladders, scaffolding poles, piping, or high-rise metal tools near power lines. Heavy or large equipment can be driven into lines accidentally. Care should be taken when operating cranes, front-end loaders, backhoes, concrete pump trucks, or farm equipment, such as augers. Any equipment with a boom or any part that can contact the power line when extended can also be hazardous when trees or other objects obscure worker's view of lines. Whenever operating equipment, which is within reach of an energized line, make sure to use a spotter or signal person.

The signal person should have a clear view of the line and the equipment and be able to alert the operator when approaching within 10 feet of an energized power line. For your safety, review the **Washington Administrative Codes for Construction Workers (WAC 296-155)** Part I (Electrical), Part L (Cranes, Derricks, Hoists, Elevators and Conveyers).

- **Plan ahead.** If your equipment will be operating in the vicinity of power facilities, check to make sure there is no possibility of accidentally striking a power line or digging into a buried cable. Train workers to maintain clearances when carrying high-rise equipment under lines.
- **Don't touch electrical equipment** and never attempt to move or raise electric lines or equipment. If you need help to make the lines safe, or have any doubts or questions about the safety of your job site, call the utility.
- **Operating Cranes or Lifts near power lines.** High voltage contact is the largest single cause of fatalities associated with crane accidents.
- **Pre-Job planning.** The time to take care of power line problems is during pre-job planning, after the first site survey is made by a contractor. Take care of the problem prior to the crane's arrival to avoid job delays and prevent accidents.
- **Exercise extreme caution when traveling the crane** as uneven ground can cause the boom to weave or bob into power lines.
- **Establish clearances and enforce procedures to prevent contact.** Keep all personnel well away from the crane whenever it is working close to power lines. If the crane operator accidentally makes contact with the energized line, anyone who touches the equipment and ground at the same time risks being shocked or electrocuted.
- **Site Supervisor.** When power lines are present on or near the site, the safety of the crane operation is the responsibility of the personnel in charge of the job site.

Crane Operators

Before setting up or operating on any project, **check for power lines**; if present, **exercise extreme caution** by marking and using a signal person to help you maintain clearances.

- **Assign a qualified signal person.** When making the pick or whenever the crane is being operated near the clearance limit to the energized power lines. The signal person can warn the operator when the machine is approaching the clearance limit because an operator may not be able to accurately judge the distance. The signal person should have no other duties while the machine is working near the power line.
- **Do not rely on other protective devices.** Proximity alarms, cage-type boom guards, insulated links, or any similar devices as each type have limitations. The use of such devices does not alter the clearance limit requirements even if the device is required by law or regulation. Warning signs are to be posted for potentially dangerous areas (see WAC 296-155-428).
- **Don't allow anyone to touch** the load, crane, or crane hook until the signal person indicates that it is safe to do so, (i.e. the crane is outside the clearance distance of the wires).
- **Avoid using taglines** except when it is possible for the load to spin into the power lines.

Note: *All ropes can conduct electricity under the right conditions. Dry, clean polypropylene provides better insulating properties than most commercially available rope. However, even tag lines must not violate the minimum clearance requirements.*

- **Slow down the operating cycle of the machine** by reducing hoisting, booming, swinging, and travel speeds.
- **Exercise extreme caution** when working near overhead lines that have long spans, as they tend to swing laterally in the wind. Accidental contact could occur.
- **The operator should not leave the crane** if the boom, when lowered, can enter the clearance limit.

In The Event Of Electrical Contact

- **Do not panic! Remain inside the cab.** You should be safe where you are. Do not try to get off the crane, touching it and the ground at the same time could be fatal.
- **Instruct all other personnel to keep at least 30 feet away** from the machine, ropes, and the load. The entire machine, load, and the ground around it could be energized.
- **The crane operator may try to remove the contact (only if it is safe to attempt)** unaided, and without anyone approaching the crane. Move away from the line in the reverse direction to that which caused the contact (for example, if you swung left into the wire, swing right to break the contact).

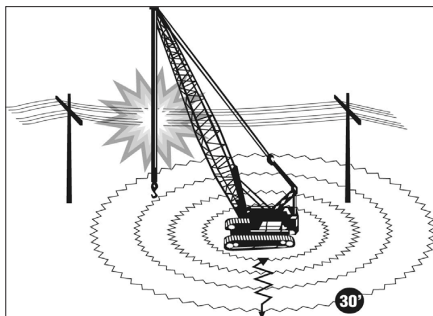
Remember: *Once an arc has been struck, it can draw out a considerable distance before it breaks, so keep moving away from the line until the arc breaks and then continue moving until you are at least 10 to 15 feet away from the line.*

Caution: *If the crane's ropes appear to be welded to the power line, do not move away from the line as it may snap and whip. Stay where you are until help arrives.*

- **If the crane cannot be moved away** or disengaged from the contact, remain inside until a qualified electrical utility worker de-energizes the circuit and confirms that conditions are safe.
- **Completely inspect the equipment for possible damage.** Wire rope should be replaced if it has touched an energized line since the arc is usually of sufficient power to either weld, melt, or badly pit the rope. The damaged section of rope will look like it was burned with a torch.
- **Report every incident** involving contact with a live line to local electric utility so inspections and repairs can be made to prevent damaged power lines from falling at a later date.

Bailout Procedure

- **Should a contact occur**, and if the operator decides to leave the machine, they must jump clear. They must never just step down which would allow part of their body to be in contact with the ground while another part of the body is touching the machine (“touch potential”).
- **High voltage contact will result in electrical current flowing down the boom and through the crane to the ground. The ground can become energized in rings or potentials (like ripples on water or like a dart board) with high voltage near the crane and lower voltages further from it.**



- “Step” potential occurs when walking towards or away from energized equipment or downed lines. By taking a step, one foot will be in a ring (or potential) that has high voltage and the other in another ring (or potential) that has a lower voltage. A worker’s body may provide a better path for the electricity which could flow up one leg, down the other to ground, causing them to be shocked or electrocuted.
- **Because of the hazardous voltage differential in the ground, the operator who must bail out should stand on the door ledge (rocker panel), jump clear with both feet together, making sure not to touch the vehicle and ground at the same time with any part of their body. Land with both feet together on the ground, maintain balance and while keeping feet together, shuffle or (hop slowly) away from the vehicle for at least 30 feet. To avoid “step potential” do not take large steps!**

Underground Power-Line Safety:

Digging trenches or excavating in areas where there might be underground power lines can be dangerous and expensive. One misplaced shovel or bucket could cause serious injury, knock out services or damage surrounding homes and businesses. Washington Administrative Code and Washington Industrial Safety and Health Act (WISHA) rules (296-155 “Safety Standards for Construction Workers”) require “before opening an excavation or trench, underground utilities such as sewer, telephone, natural gas, electric, water line or other installations shall be located”. Excavators are responsible for ascertaining the location and voltage of any underground electric lines employees may be working around and providing any protective measures and methods for working safely around them. Workers, their tools, and any machinery may not contact energized electrical lines; when such lines are found, notify the appropriate utility company. A qualified worker from the utility shall make positive identification and take the necessary steps (barriers/supports) to protect exposed (electric) lines from the work area.

If An Accident Does Happen, Stay Calm!

There are a number of basic steps to follow in case of an electrical accident:

- **Do not touch the injured or any equipment in contact with the injured person.** Even if it appears that the accident caused the electricity to be de-energized, use caution. Always assume the power lines are hot or energized. Modern electric lines usually relay back into service and become energized several times within a matter of seconds following an accident, or they may not shut-down at all.
- **Prevent others from approaching the victim** and any electrically energized vehicles, objects, or structures.

- Turn the electricity off (household fuse box, circuit breaker, etc.) quickly if you can. A serious electrical injury will cause muscles to contract, making it difficult or impossible for a victim to pull free from an electric source that is still energized. Cutting off the power will usually free the victim.

DO NOT ATTEMPT TO DE-ENERGIZE HIGH-VOLTAGE POWER LINES. CALL THE LOCAL ELECTRIC UTILITY IMMEDIATELY!

- **Send for help.** Call 911 to notify both the Police and the Fire Department. Also call the utility so the electricity can be turned off.
- **Once the victim is separated from the live electrical source, provide first aid until help arrives.**
- **If a vehicle is involved** and lines are touching it, anyone who touches it while standing on the ground may be shocked or electrocuted. If it is your vehicle, sit quietly inside and wait for help to arrive. If bystanders arrive, roll down the window, and shout to them to stand at least 30 feet clear of the vehicle so that they are not shocked or electrocuted. Ask them to call for help. **You are safe inside the vehicle, (like a bird on a wire) as long as you do not step out and touch the vehicle and ground at the same time.** Remember, the electricity is not only traveling through the vehicle, but is also traveling in the ground around the area.
- **If the vehicle is on fire** and it is necessary to leave it, keep both feet together, while you jump clear of the vehicle, avoiding any wires that might be on the ground. Stay calm and jump carefully so that you don't fall back against the car or touch the ground and the vehicle at the same time. Then **shuffle**, with both feet together clear of the area, keeping both feet on the ground and touching at all times. **Continue shuffling for at least 30 feet from the accident site.**

Water, Sewer and Storm Lines

The Following Material is Included To Help Excavators Avoid Problems When Digging Around or Near Potable Water Lines.

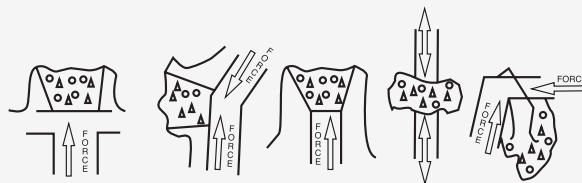
Potable water lines are used for drinking water, fire protection, and irrigation. Potable water lines are typically under pressure and if damaged during construction, can cause significant loss of service, property damage, and injury. Pressure range can be from 25 psi (pounds per square inch) to above 200 psi. When working in any area near water lines, make sure the valve boxes remain accessible in case an emergency shut down is needed.

In all suggestions or recommendations listed below, the water purveyor may have differing requirements. These listed are suggested guidelines and are not intended to be all-inclusive or exclusive of local requirements.

Bends, Tees, Caps, & Thrust Blocks

Bends are installed on lines to fit the contour of the street alignment, avoid objects underground, or to change elevations. Tees are used to branch the line. Caps are used to end the main line pipe. At the bends, tees, and caps are thrust blocks. Thrust blocks keep the pipe in place and take the force the pressurized waterline exerts when deflected in different directions. Thrust blocks are typically designed for the bearing area of the ground behind or around them. Other types of thrust blocks are vertical/hanging blocks and collar blocks that encompass pipe.

Bearing Area



Actual force depends on the size and pressure of the water line. Simple calculations determine force for field applications. (This is intended for illustration only, not for design purposes).

For example: 8" water main has a radius of 4". Using the calculation π radius squared: $(\pi) 3.14 * 4 * 4 * \text{psi} = \text{pounds of force}$.

At 25 psi, this 8" line could have 1256 pounds of force exerted on the thrust block. At 200 psi, this 8" line could have 10,048 pounds of force exerted on the thrust block. (Not considering surcharging).

Do not disturb the ground around the thrust block or the thrust block itself. This may result in major leaks or break in water lines.

Excavation and Backfill practices near water main & services

Do not expose pressurized water main line for a distance greater than 1 stick of pipe or less. Pressurized water line can move vertically or horizontally and rupture. Similarly for excavating under water line. Support line and excavate or expose only what is necessary to successfully cross.

Do not use calcified backfill material against water lines such as concrete or cdf unless water lines are wrapped in 8 mil plastic.

Check with the water purveyor for separation distance from other utilities and desired bedding for existing water main.

Water Services

Water services can be made of pliable materials such as soft copper or polyethylene, or more rigid material such as galvanized pipe, schedule 40 or 80 pvc, or other materials. Water service lines should be bedded in sandy, rock-free material prior to backfilling. Caution should be taken when compacting to prevent damaging of service or pulling from mainline.

Do not pull or dent water services. Dents and kinks may not leak immediately, but the water moving inside the service will wear on the defect and create a leak in the future. Report any dents, kinks, or pulling to the water purveyor.

Do not shut down water main lines without the purveyor's permission. Tampering with a public water system is a Federal Offense (US Code Title 42, Section 300i-1).

Most water purveyors also have policies with fine schedules that forbid an excavator from tampering or shutting down the existing public system. Conditions or customers such as clinics, hospitals, and home medical equipment cannot have the water shut off without notice.

Always contact the water purveyor if you have any questions.

The Following Material is Included To Help Excavators Avoid Problems When Digging Around or Near Sanitary Sewer Lines

Sanitary Sewer lines are primarily used to dispose of human, industrial, and commercial waste that can contain fecal matter, chemicals, gases, and blood borne pathogens. If damaged during construction, Sanitary Sewer lines can cause significant loss of service, costly property or wildlife damage, and injury. When working in any area where sewer is nearby, make sure the manhole lids remain accessible in case of an emergency back up or damage occurs.

In all suggestions or recommendations listed below, the sewer purveyor may have differing requirements. These listed are suggested guidelines and are not intended to be all-inclusive or exclusive of local requirements.

Manholes

Manholes are concrete structures that allow access to sewer lines for maintenance and cleaning. Manholes contain contaminants, flammables, and raw sewage that can affect the air quality inside the manhole. For that reason, confined space entry procedures required by Federal, State or local agencies should be followed for manhole entry, if entry is allowed by the sewer purveyor.

Do not allow construction debris or fluids to enter the manholes or sewer line at any time. This may cause costly blockage and backups. If debris enters sewer system, contact the sewer purveyor.

Do not excavate enough material near the manhole to create uneven loading on the sides of the structure or it may topple.

Excavation and backfill practices near sewer main & services

Sewer lines, (mains and services), consist of many different types of pipe. Clay, concrete, PVC, HDPE, ductile iron, steel, cast iron, etc. Older brittle pipe may be present. Extreme caution must be used when excavating near existing sewer lines. 18" minimum vertical separation when crossing perpendicular above existing sewer line is desired. Sewer lines should be re-bedded in rock free material. Caution must be taken when compacting to prevent damaging of pipeline.

If crossing under existing sewer lines, additional measures must be taken depending on type of utility being installed. Support existing pipe and backfill up tight to eliminate sagging of sewer line. Depending on excavation depth, width, and pipe types, the sewer purveyor may require cdf backfill to preclude future settlement,

Anticipate side sewer laterals to service the structures nearby. Note that some sewer purveyors do not mark side sewer laterals, but rely on the structure to indicate the presence of a sewer lateral. Some purveyors will mark to the r/w line or easement line.

Contact the sewer purveyor for separation distance from other utilities, desired bedding for existing sewer main and services and information on type of pipe if not identified in the locate marks or plans.

Do not pull, damage or dent any sewer mainline or service. The damaged area may not leak immediately but could in the future. Report any damage to the sewer purveyor immediately.

Most sewers are gravity, but many areas have sewer force mains that are installed similar to water main. If working near a sewer force main under pressure, familiarize yourself with the "working around water main guidelines" and contact the sewer purveyor for more information. Always contact the sewer purveyor if you have any questions.

Fiber Optic Lines

The following material is included to help excavators avoid problems when digging around or near fiber optic lines.

Fiber Optic lines are used by a variety of organizations for the efficient transfer of large volumes of information. They can be very costly and time consuming to repair with additional monetary penalties related to temporary loss of provided services.

In all suggestions or recommendations listed below, the fiber optic owner may have differing requirements. The following are suggested guidelines and are not intended to be all-inclusive or exclusive of local requirements.

Fiber optic systems

The amount of underground fiber optic facilities is increasing as more organizations deploy it. Existing facilities can include; direct bury, poly conduit, metal conduit or clay. Damage can disrupt public, private or governmental services with the cost of repair and lost service justifying any extra effort to avoid damage.

Safety

If a fiber line is damaged, never look directly into the fiber as non visible laser light can damage the eye. Use caution with the fiber strands themselves as small particles of glass can enter the body and be undetectable by X-Ray.

Always call for locates

Some fiber optic cables do not contain metal, making them difficult to locate. In some cases, the locating conductor is contained within the conduit or as a separate locating wire. When using a locator, always use the direct connection method as opposed to induction. The fiber optic owner should be contacted if there are any problems in finding a suitable connection.

Contact is key

One of the best ways to avoid costly accidental damage is to contact the fiber optic owner before excavation begins. In this way, the excavator and facility owner work together as a team to avoid problems. An on-site preconstruction meeting provides an opportunity to acquire plans and contact information. Some organizations insist on having a spotter present during any excavation.

Damage

Always immediately alert the fiber optic owner to even small amounts of damage to a fiber optic cable. Disruptions in service and reliability may not always be visible or may manifest themselves over time. Never attempt to repair a damaged line or backfill over it. Always notify the owner to any damage in the conduit or the locating wires so they might send a crew to make repairs

Chapter 19.122 RCW UNDERGROUND UTILITIES

RCW SECTIONS

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19.122.120

One-number locator service to provide excavation confirmation code.

19.122.900

Severability -- 1984 c 144.27

RCW 19.122.010

Intent.

It is the intent of the legislature in enacting this chapter to assign responsibilities for locating and keeping accurate records of utility locations, protecting and repairing damage to existing underground facilities, and protecting the public health and safety from interruption in utility services caused by damage to existing underground utility facilities.

RCW 19.122.020

Definitions.

Unless the context clearly requires otherwise, the definitions in this section apply throughout this chapter:

1. “Business day” means any day other than Saturday, Sunday, or a legal local, state, or federal holiday.
2. “Damage” includes the substantial weakening of structural or lateral support of an underground facility, penetration, impairment, or destruction of any underground protective coating, housing, or other protective device, or the severance, partial or complete, of any underground facility to the extent that the project owner or the affected utility owner determines that repairs are required.
3. “Emergency” means any condition constituting a clear and present danger to life or property, or a customer service outage.
4. “Excavation” means any operation in which earth, rock, or other material on or below the ground is moved or otherwise displaced by any means, except the tilling of soil less than twelve inches in depth for agricultural purposes, or road and ditch maintenance that does not change the original road grade or ditch flowline.
5. “Excavation confirmation code” means a code or ticket issued by the one-number locator service for the site where an excavation is planned. The code must be accompanied by the date and time it was issued.
6. “Excavator” means any person who engages directly in excavation.
7. “Gas” means natural gas, flammable gas, or toxic or corrosive gas.

8. “Hazardous liquid” means: (a) Petroleum, petroleum products, or anhydrous ammonia as those terms are defined in 49 C.F.R. Part 195 as in effect on March 1, 1998; and (b) carbon dioxide. The utilities and transportation commission may by rule incorporate by reference other substances designated as hazardous by the secretary of transportation.
9. “Identified facility” means any underground facility which is indicated in the project plans as being located within the area of proposed excavation.
10. “Identified but unlocatable underground facility” means an underground facility which has been identified but cannot be located with reasonable accuracy.
11. “Locatable underground facility” means an underground facility which can be field-marked with reasonable accuracy.
12. “Marking” means the use of stakes, paint, or other clearly identifiable materials to show the field location of underground facilities, in accordance with the current color code standard of the American Public Works Association. Markings shall include identification letters indicating the specific type of the underground facility.
13. “Notice” or “notify” means contact in person or by telephone or other electronic methods that results in the receipt of a valid excavation confirmation code.
14. “One-number locator service” means a service through which a person can notify utilities and request field-marking of underground facilities.
15. “Operator” means the individual conducting the excavation.
16. “Person” means an individual, partnership, franchise holder, association, corporation, a state, a city, a county, or any subdivision or instrumentality of a state, and its employees, agents, or legal representatives.

17. “Pipeline” or “pipeline system” means all or parts of a pipeline facility through which hazardous liquid or gas moves in transportation, including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks. “Pipeline” or “pipeline system” does not include process or transfer pipelines as defined in RCW 81.88.010.
18. “Pipeline company” means a person or entity constructing, owning, or operating a pipeline for transporting hazardous liquid or gas. A pipeline company does not include: (a) Distribution systems owned and operated under franchise for the sale, delivery, or distribution of natural gas at retail; or (b) excavation contractors or other contractors that contract with a pipeline company.
19. “Reasonable accuracy” means location within twenty-four inches of the outside dimensions of both sides of an underground facility.
20. “Transmission pipeline” means a pipeline that transports hazardous liquid or gas within a storage field, or transports hazardous liquid or gas from an interstate pipeline or storage facility to a distribution main or a large volume hazardous liquid or gas user, or operates at a hoop stress of twenty percent or more of the specified minimum yield strength.
21. “Underground facility” means any item buried or placed below ground for use in connection with the storage or conveyance of water, sewage, electronic, telephonic or telegraphic communications, cablevision, electric energy, petroleum products, gas, gaseous vapors, hazardous liquids, or other substances and including but not limited to pipes, sewers, conduits, cables, valves, lines, wires, manholes, attachments, and those parts of poles or anchors below ground. This definition does not include pipelines as defined in subsection (17) of this section, but does include distribution systems owned and operated under franchise for the sale, delivery, or distribution of natural gas at retail.

RCW 19.122.027

One-number locator services -- Single statewide toll-free telephone number.

1. The utilities and transportation commission shall cause to be established a single statewide toll-free telephone number to be used for referring excavators to the appropriate one-number locator service.
2. The utilities and transportation commission, in consultation with the Washington utilities coordinating council, shall establish minimum standards and best management practices for one-number locator services.
3. One-number locator services shall be operated by nongovernmental agencies.

RCW 19.122.030

Notice of excavation to owners of underground facilities

-- One-number locator service -- Time for notice -- Marking of underground facilities -- Costs.

1. Before commencing any excavation, excluding agriculture tilling less than twelve inches in depth, the excavator shall provide notice of the scheduled commencement of excavation to all owners of underground facilities through a one-number locator service.
2. All owners of underground facilities within a one-number locator service area shall subscribe to the service. One-number locator service rates for cable television companies will be based on the amount of their underground facilities. If no one-number locator service is available, notice shall be provided individually to those owners of underground facilities known to or suspected of having underground facilities within the area of proposed excavation. The notice shall be communicated to the owners of underground facilities not less than two business days or more than ten business days before the scheduled date for commencement of excavation, unless otherwise agreed by the parties.

3. Upon receipt of the notice provided for in this section, the owner of the underground facility shall provide the excavator with reasonably accurate information as to its locatable underground facilities by surface-marking the location of the facilities. If there are identified but unlocatable underground facilities, the owner of such facilities shall provide the excavator with the best available information as to their locations. The owner of the underground facility providing the information shall respond no later than two business days after the receipt of the notice or before the excavation time, at the option of the owner, unless otherwise agreed by the parties. Excavators shall not excavate until all known facilities have been marked.

Once marked by the owner of the underground facility, the excavator is responsible for maintaining the markings¹. Excavators shall have the right

to receive compensation from the owner of the underground facility for costs incurred if the owner of the underground facility does not locate its facilities in accordance with this section.

4. The owner of the underground facility shall have the right to receive compensation for costs incurred in responding to excavation notices given less than two business days prior to the excavation from the excavator.
5. An owner of underground facilities is not required to indicate the presence of existing service laterals or appurtenances if the presence of existing service laterals or appurtenances on the site of the construction project can be determined from the presence of other visible facilities, such as buildings, manholes, or meter and junction boxes on or adjacent to the construction site.
6. Emergency excavations are exempt from the time requirements for notification provided in this section.
7. If the excavator, while performing the contract, discovers underground facilities which are not identified, the excavator shall cease excavating in the vicinity of the facility and immediately notify the owner or operator of such facilities, or the one-number locator service.

RCW 19.122.033

Notice of excavation to pipeline companies.

1. Before commencing any excavation, excluding agricultural tilling less than twelve inches in depth, an excavator shall notify pipeline

¹See recommended guideline for maintaining marks

companies of the scheduled commencement of excavation through a one-number locator service in the same manner as is required for notifying owners of underground facilities of excavation work under RCW 19.122.030. Pipeline companies shall have the same rights and responsibilities as owners of underground facilities under RCW 19.122.030 regarding excavation work. Excavators have the same rights and responsibilities under this section as they have under RCW 19.122.030.

2. Project owners, excavators, and pipeline companies have the same rights and responsibilities relating to excavation near pipelines that they have for excavation near underground facilities as provided in RCW 19.122.040.

RCW 19.122.035

Pipeline company duties after notice of excavation -- Examination -- Information of damage -- Notification of local first responders.

1. After a pipeline company has been notified by an excavator pursuant to RCW 19.122.033 that excavation work will uncover any portion of the pipeline, the pipeline company shall ensure that the pipeline section in the vicinity of the excavation is examined for damage prior to being reburied.
2. Immediately upon receiving information of third-party damage to a hazardous liquid pipeline, the company that operates the pipeline shall terminate the flow of hazardous liquid in that pipeline until it has visually inspected the pipeline.

After visual inspection, the operator of the hazardous liquid pipeline shall determine whether the damaged

pipeline section should be replaced or repaired, or whether it is safe to resume pipeline operation. Immediately upon receiving information of third-party damage to a gas pipeline, the company that operates the pipeline shall conduct a visual inspection of the pipeline to determine whether the flow of gas through that pipeline should be terminated, and whether the damaged pipeline should be replaced or repaired. A record of the pipeline company's inspection report and test results shall be provided to the utilities and transportation commission consistent with reporting requirements under 49 C.F.R. 195 Subpart B.

3. Pipeline companies shall immediately notify local first responders and the department of any reportable release of a hazardous liquid from a pipeline. Pipeline companies shall immediately notify local first responders and the commission of any blowing gas leak from a gas pipeline that has ignited or represents a probable hazard to persons or property. Pipeline companies shall take all appropriate steps to ensure the public safety in the event of a release of hazardous liquid or gas under this subsection.
4. No damaged pipeline may be buried until it is repaired or relocated. The pipeline company shall arrange for repairs or relocation of a damaged pipeline as soon as is practical or may permit the excavator to do necessary repairs or relocation at a mutually acceptable price.

RCW 19.122.040

Underground facilities identified in bid or contract -- Excavator's duty of reasonable care -- Liability for damages -- Attorneys' fees.

1. Project owners shall indicate in bid or contract documents the existence of underground facilities known by the project owner to be located within the proposed area of excavation. The following shall be deemed changed or differing site conditions:
 - a. An underground facility not identified as required by this chapter or other provision of law; and

- b. An underground facility not located, as required by this chapter or other provision of law, by the project owner or excavator if the project owner or excavator is also a utility.

2. (2) An excavator shall use reasonable care to avoid damaging underground facilities. An excavator shall:
 - a. Determine the precise location of underground facilities which have been marked;
 - b. Plan the excavation to avoid damage to or minimize interference with underground facilities in and near the excavation area; and
 - c. Provide such support for underground facilities in and near the construction area, including during backfill operations, as may be reasonably necessary for the protection of such facilities.
3. If an underground facility is damaged and such damage is the consequence of the failure to fulfill an obligation under this chapter, the party failing to perform that obligation shall be liable for any damages. Any clause in an excavation contract which attempts to allocate liability, or requires indemnification to shift the economic consequences of liability, different from the provisions of this chapter is against public policy and unenforceable. Nothing in this chapter prevents the parties to an excavation contract from contracting with respect to the allocation of risk for changed or differing site conditions.
4. In any action brought under this section, the prevailing party is entitled to reasonable attorneys' fees.

RCW 19.122.045

Exemption from liability.

Excavators who comply with the requirements of this chapter are not liable for any damages arising from contact or damage to an underground fiber optics facility other than the cost to repair the facility.

RCW 19.122.050

Damage to underground facility -- Notification by excavator -- Repairs or relocation of facility.

1. An excavator who, in the course of excavation, contacts or damages an underground facility shall notify the utility owning or operating such facility and the one-number locator service. If the damage causes an emergency condition, the excavator causing the damage shall also alert the appropriate local public safety agencies and take all appropriate steps to ensure the public safety. No damaged underground facility may be buried until it is repaired or relocated.
2. The owner of the underground facilities damaged shall arrange for repairs or relocation as soon as is practical or may permit the excavator to do necessary repairs or relocation at a mutually acceptable price.

RCW 19.122.055

Failure to notify one-number locator service -- Civil penalty, if damages.

1. a. Any excavator who fails to notify the one-number locator service and causes damage to a hazardous liquid or gas pipeline is subject to a civil penalty of not more than ten thousand dollars for each violation.

a. The civil penalty in this subsection may also be imposed on any excavator who violates RCW 19.122.090.
2. All civil penalties recovered under this section shall be deposited into the pipeline safety account created in RCW 81.88.050.

RCW 19.122.060

Exemption from notice and marking requirements for property owners.

An excavation of less than twelve inches in vertical depth on private noncommercial property shall be exempt from the requirements of RCW 19.122.030, if the excavation is being performed by the person or an employee of the person who owns or occupies the property on which the excavation is being performed.

RCW 19.122.070

Civil penalties -- Treble damages -- Existing remedies not affected.

1. Any person who violates any provision of this chapter not amounting to a violation of RCW 19.122.055, and which violation results in damage to underground facilities, is subject to a civil penalty of not more than one thousand dollars for each violation. All penalties recovered in such actions shall be deposited in the general fund.
2. Any excavator who willfully or maliciously damages a field-marked underground facility shall be liable for treble the costs incurred in repairing or relocating the facility. In those cases in which an excavator fails to notify known underground facility owners or the one-number locator service, any damage to the underground facility shall be deemed willful and malicious and shall be subject to treble damages for costs incurred in repairing or relocating the facility.
3. This chapter does not affect any civil remedies for personal injury or for property damage, including that to underground facilities, nor does this chapter create any new civil remedies for such damage.

RCW 19.122.075

Damage or removal of permanent marking -- Civil penalty.

Any person who willfully damages or removes a permanent marking used to identify an underground facility or pipeline, or a temporary marking prior to its intended use, is subject to a civil penalty of not more than one thousand dollars for each act.

RCW 19.122.080

Waiver of notification and marking requirements.

The notification and marking provisions of this chapter may be waived for one or more designated persons by an underground facility owner with respect to all or part of that underground facility owner's own underground facilities.

RCW 19.122.090

Excavation without a valid excavation confirmation code--Penalty.

Any excavator who excavates, without a valid excavation confirmation code when required under this chapter, within thirty-five feet of a transmission pipeline is guilty of a misdemeanor.

RCW 19.122.100

Violation of RCW 19.122.090--Affirmative defense.

If charged with a violation of RCW 19.122.090, an operator will be deemed to have established an affirmative defense to such charges if:

1. The operator was provided a valid excavation confirmation code;
2. The excavation was performed in an emergency situation;
3. The operator was provided a false confirmation code by an identifiable third party; or
4. Notice of the excavation was not required under this chapter.

RCW 19.122.110

False excavation confirmation code--Penalty.

Any person who intentionally provides an operator with a false excavation confirmation code is guilty of a misdemeanor.

RCW 19.122.120

One-number locator service to provide excavation confirmation code.

Upon receipt, during normal business hours, of notice of an intended excavation, the one-number locator service shall provide an excavation confirmation code.

RCW 19.122.900

Severability -- 1984 c 144.

If any provision of this act or its application to any person or circumstance is held invalid, the remainder of the act or the application of the provision to other persons or circumstances is not affected.

Washington Utilities Coordinating Council Recommended Guidelines For Maintaining The Marks November 2005

RCW 19.122.030

2. All owners of underground facilities within a one-number locator service area shall subscribe to the service. One-number locator service rates for cable television companies will be based on the amount of their underground facilities. If no one-number locator service is available, notice shall be provided individually to those owners of underground facilities known to or suspected of having underground facilities within the area of proposed excavation. **The notice shall be communicated to the owners of underground facilities not less than two business days or more than ten business days before the scheduled date for commencement of excavation, unless otherwise agreed by the parties.¹**
3. Upon receipt of the notice provided for in this section, the owner of the underground facility shall provide the excavator with reasonably accurate information as to its locatable underground facilities by surface-marking the location of the facilities. If there are identified but unlocatable underground facilities, the owner of such facilities shall provide the excavator with the best available information as to their locations. The owner of the underground facility providing the information shall respond no later than two business days after the receipt of the notice or before the excavation time, at the option of the owner, unless otherwise agreed by the parties. Excavators shall not excavate until all known facilities have been marked.

Once marked by the owner of the underground facility, the excavator is responsible for maintaining the markings. See copy, after this page, of written opinion of the Washington Utilities and Transportation Commission. Excavators shall have the right to receive compensation from the owner of the underground facility for costs incurred if the owner of the underground facility does not locate its facilities in accordance with this section.



State Of Washington Washington Utilities And Transportation Commission

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September 3, 2003
Mr. Mark Pederson
Snohomish Public Utility District
P.O. Box 1107
Everett, Washington 98206
Re: The need to renew utility locates after ten days under
RCW 19.122

Dear Mr. Pederson:

You asked us to examine whether RCW 19.122, the Call Before You Dig Law, requires excavators to renew their tickets after ten days if excavation is not complete.

Commission staff, in consultation with the Utilities & Transportation Division of the Attorney General's Office, has examined this question. We conclude that so long as the excavator maintains the markings as required, and so long as the originally scheduled excavation date was given in good faith, there is no requirement for the excavator to renew its ticket or request the facilities owner to remark the utility facilities. **RCW 19.122 - the Call Before You Dig Law**

The intent of the statute is to "protect the public health and safety from interruption in utility services caused by damage to existing underground utility facilities." RCW 19.122.010. The statute sets up a procedure to help assure such accidents do not happen. Before commencing any excavation, the excavator is required to notify the owner of underground facilities "through a one-number locator service" to have those facilities marked prior to excavation.

The notice by the excavator is to be given "not less than two business days nor more than ten business days before the scheduled date for commencement of excavation, unless otherwise agreed to by the parties." RCW 19.122.030(2). The facilities owner is required to respond "no later than two business days after receipt of the notice or before the excavation time, at the option of the owner, unless otherwise agreed to by the parties." RCW 19.122.030(3). "Once marked, the excavator is responsible for maintaining the markings." RCW 19.122.030(3).

Discussion:

Recall that the statutory notice to facilities owners and the marking of those facilities by the owner, are triggered by the "scheduled date for commencement of excavation." RCW 19.122.030(2). That date is assumed to be a good faith estimated date of actual excavation by the excavator. While the scheduled date may change, the statute places the onus on the excavator to maintain the markings. RCW 19.122.030(3). To interpret the statute to require the excavator to notify facilities owners each time the scheduled date for commencement of excavation changes does not appear consistent with an excavator's obligation to maintain the markings; nor is it practical.

Upon a review of the statute and related bill files for Substitute House Bill 857 and its predecessor bills, staff found nothing that suggests the markings are good for one ten days. The marking can be done at any time before the scheduled excavation date, and the minimum notice to the facilities owner is two business days before the scheduled excavation date.

Accordingly, there is nothing in the statute that reflects a ten-day "life" for facilities marks. On the contrary, the requirement that the excavator maintain the markings suggests that, so long as that requirement is obeyed, only one marking of facilities by the facilities owner need be accomplished.

Since facility locates need not be renewed after ten days, it logically follows that actions based on an excavator's failure to renew locates are not supported by the requirements of RCW 19.122. In your May 6 e-mail, you state "one or two large utilities are billing excavators if their locate tickets have not been re-called every ten days and they cause damage." Assuming the excavator has maintained the marks as

required and the damaged facilities were not identified by the owner, efforts to collect from excavators the cost of repairing damaged facilities are not supported by the provisions of FCW 19.122.

Conclusion:

Staff concludes that so long as the excavator maintains the markings as required and so long as the originally scheduled excavation date was given in good faith, there is no requirement for the excavator to renew its ticket or request a remarking of utility facilities.

Please note that the Commission does not administer RCW 19.122. Further, the opinion expressed here reflects the view of the UTC Pipeline Safety staff and does not necessarily reflect the opinion of the Commission, should it be called upon to address this issue in a proper proceeding.

If you have questions about this letter or would like our assistance on any other matter, please contact Alan Rathbun, Pipeline Safety Director at 360-664-1254 or arathbun@wutc.wa.gov.

Sincerely,



Carole J. Washburn
Executive Secretary

cc: Don Evans-P.O. Box 4796-South Colby, Washington
98384-0796

Actions recommended by the Washington Utilities Coordinating Council which would indicate compliance with "maintaining the markings."

Onsite personnel, responsible for maintaining the marks, should determine which method would be most effective for the job. Depending on the job/area and size/complexity, individual utility companies may impose separate compliance requests. In addition, the utility owner/operators reserve the right to recover costs of remarking. Requests for remarks should include specifics such as size of area needing remarks and specific utilities, if applicable, that need remarking.

- Preserve or protect as much of the original marks as possible.
 - Use off-set* staking, in areas where original locate marks will be continuously destroyed by excavation or weather. (* These marks must be uniformly aligned and must indicate the specific distance from the markings to the original markings that indicated the location of the underground facility.)
 - Digital photo, or other permanent imaging, or drawings (both to scale) in areas where original locate marks will be continuously destroyed by excavation or weather.
 - Use white paint to maintain the original markings
1. Bookend the original locates marks with solid white squares or brackets.
 2. Paint dots between the original locate, using white paint, every eighteen to twenty four inches, for the whole length of each original marking. Include the type of facility marks, e.g., T for telephone, G for natural gas, W for water, etc.)
 3. Do not, under any circumstances, paint over yellow paint.

APWA

(AMERICAN PUBLIC WORKS ASSOCIATION)

COLOR CODE

Color-coded surface marks indicate the locations of buried utility lines. Know how to identify buried lines by their color.



Red = Electric power lines. cable



Yellow = Gas, Oil, Petroleum



Orange = Telephone, Cable TV



Blue = Drinking Water



Green = Sewer



Purple = Non-Drinking Water



Pink = Survey Marks



White = Excavator Marks

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